

ABSTRACT

A method and apparatus for measuring spectral information of light from at least one object includes at least one light detector and at least one transparent body. The transparent body has a front side that has an entrance aperture and at least one reflecting surface. The transparent body also has a back side that includes at least one reflecting surface and an exit surface. The detector is positioned near the exit surface. At least one of the front reflecting surface and the back reflecting surface includes a diffractive optical element arranged to receive diverging light from the aperture. A focusing element focuses diffracted light to the exit surface. The apparatus may comprise multiple channels and may also include a device for measuring a distance to the object.